

We claim:

1. A method of producing an improved water-soluble plant extract of a plant biomass of the Labiatae family containing one or more antioxidant compounds, wherein said extract is essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and has an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water, the method comprising:
  - (a) contacting said plant biomass with hot water to form a water-soluble crude extract;
  - (b) adjusting the pH of the crude extract to between about 1.7 and 3.5 to form an acidified plant extract;
  - (c) adding a water-immiscible organic solvent to said acidified plant extract;
  - (d) extracting said antioxidant compounds into the organic solvent; and
  - (e) isolating said organic solvent to provide said improved water-soluble plant extract.
2. The method of claim 1, wherein the pH is adjusted to approximately 1.7 to 3.5 by the addition of an acid selected from the group consisting of phosphoric acid, sulfuric acid, and hydrochloric acid.
3. The method of claim 1, wherein said organic solvent is selected from the group consisting of ethyl acetate, n-propyl acetate, isopropyl acetate, n-butyl acetate, sec-butyl acetate, t-butyl acetate, diethyl ether, and methyl t-butyl ether.
4. The method of claim 1, wherein said plant biomass is from a genus selected from the group consisting of *Acinos*, *Calamintha*, *Clinopodium*, *Glechoma*, *Hyssopus*, *Lavandula*, *Lycopus*, *Melissa*, *Mentha*, *Nepeta*, *Origanum*, *Prunella*, *Rosmarinus*, *Salvia*, *Satureja*, and *Thymus*.
5. The method of claim 1, wherein said plant biomass is selected from the group consisting of rosemary, sage, spearmint, balmmint, peppermint, bergamot mint, marjoram, thyme, catnip, savory, water calamint, penny royal mint, basil, and allspice.
6. The method of claim 1, wherein said plant biomass is rosemary.
7. The method of claim 1, wherein one of said antioxidant compounds is rosmarinic acid.
8. The method of claim 1, further comprising:
  - (f) adding a basic aqueous solution to said extract isolated in step (e) in an amount

sufficient to extract said water-soluble antioxidants into the aqueous phase, wherein the pH of the extract is between about 6.5 and 7.5.

9. The method of claim 8, wherein said basic aqueous solution is selected from the group consisting of sodium hydroxide, sodium bicarbonate, potassium hydroxide, ammonium hydroxide, and sodium carbonate.
10. The method of claim 8, further comprising:
  - (g) loading said aqueous phase onto a reversed-phase matrix; and
  - (h) eluting said water-soluble antioxidants.
11. The method of claim 10, wherein said reversed-phase matrix is selected from the group consisting of C18, polystyrene resin, and divinylbenzene resin.
12. The method of claim 8, further comprising passing said aqueous phase through a carbon filter.
13. The method of claim 8, further comprising filtering said extract of step (e) through silica prior to adding said basic aqueous solution.
14. The method of claim 7, wherein said rosmarinic acid is present in an amount between about 10 and 50 percent by weight of said improved extract.
15. The method of claim 1, wherein said extract contains 3-(3,4-dihydroxyphenyl) lactic acid.
16. A method for the production of an improved water-soluble plant extract from a plant biomass containing rosmarinic acid, wherein said extract is essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and has an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water, the method comprising:
  - (a) contacting said plant biomass with hot water to form a crude extract containing rosmarinic acid;
  - (b) adjusting the pH of the crude extract to between about 2 and 3 to form an acidic plant extract;
  - (c) adding to said acidified plant extract an organic solvent selected from the group consisting of ethyl acetate, n-propyl acetate, isopropyl acetate, n-butyl acetate, sec-butyl acetate, t-butyl acetate, diethyl ether, and methyl t-butyl ether;
  - (d) extracting said rosmarinic acid into said organic phase;
  - (e) adding a basic aqueous solution to said extract of step (d);
  - (f) extracting said rosmarinic acid into said aqueous phase; and

(g) passing said aqueous phase of step (f) through a reversed-phase matrix or a carbon filter.

17. The method of claim 16, further comprising passing said organic phase of step (d) though silica prior to step (e).

18. An additive for use in foods and beverages comprising an improved water-soluble plant extract, wherein said extract is prepared from a plant biomass from the Labiatae family containing antioxidant compounds, wherein said extract is essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and has an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water.

19. An additive prepared according to the method of claim 1.

20. An additive prepared according to the method of claim 8.

21. An additive prepared according to the method of claim 10.

22. An additive prepared according to the method of claim 12.

23. An additive prepared according to the method of claim 13.

24. An additive prepared according to the method of claim 16.

25. An additive prepared according to the method of claim 17.

26. A method of stabilizing the taste and/or color of a composition without imparting any unsatisfactory color or flavor, comprising adding to said composition a sufficient amount of an improved water-soluble plant extract prepared from a plant biomass from the Labiatae family containing one or more antioxidant compounds, wherein said extract is essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and has an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water.

27. A method for producing a coffee product having coffee flavor that resembles freshly brewed coffee, comprising adding to coffee beans before or after grinding said beans or adding to said coffee product an effective flavor stabilizing amount of an improved water-soluble plant extract, wherein said extract is prepared from a plant biomass from the Labiatae family containing one or more antioxidant compounds, said extract being essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and having an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water.

28. An edible or potable composition comprising a flavor and/or color stabilizing amount

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of an improved water-soluble extract prepared from a plant biomass from the Labiatae family containing one or more antioxidant compounds, wherein said extract is essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and has an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water.

29. A coffee product comprising brewed coffee and an amount of an improved water-soluble extract prepared from a plant biomass from the Labiatae family containing one or more antioxidant compounds, wherein said extract is present in an amount sufficient to enhance and/or stabilize the flavor of said coffee, said extract being essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and having an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water.

30. A method for producing a salsa product having a flavor that resembles fresh salsa, comprising adding to said salsa an effective flavor stabilizing amount of an improved water-soluble plant extract prepared from a plant biomass from the Labiatae family containing one or more antioxidant compounds, said extract being essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and having an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water.

31. A salsa product comprising salsa and an improved water-soluble plant extract in an amount sufficient to stabilize the flavor of said salsa, said extract being prepared from a plant biomass from the Labiatae family containing one or more antioxidant compounds, wherein said extract is essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and has an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water.

32. A method for stabilizing the flavor of red wine, comprising adding to said wine an effective flavor stabilizing amount of an improved water-soluble plant extract prepared from a plant biomass from the Labiatae family containing antioxidant compounds, said extract being essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and having an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water.

33. A red wine product comprising red wine and an improved water-soluble plant extract in an amount sufficient to stabilize the flavor of said wine, said extract being prepared from a plant biomass from the Labiatae family containing one or more antioxidant compounds, wherein said extract is essentially odorless, flavorless and colorless when used at a concentration between about 5 and 1000 ppm and has an absorbance of about 0.239 absorbance units at 400 nm when 0.1 mL of the extract is diluted with 10 mL of water.

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